

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (CURRENTLY AMENDED) A process for microencapsulating an active principle by coacervation comprising:

(a) dissolving a polymer in an organic solvent, which contains said active principle;

(b) adding a non-solvent to the solution of polymer, which induces ~~[[a]]~~ the controlled desolvation or coacervation of ~~[[a]]~~ the polymer dissolved in an organic solvent containing said active principle, wherein said coacervation is induced by addition of a nonsolvent, which is miscible with said organic solvent, and said coacervation being reflected by the deposition of the polymer at the surface of the active principle, and then and allows deposition of the polymer at the surface of the active principle; and

(c) curing the polymer deposit by addition of a curing agent, which allows the said curing being reflected by the formation of a continuous polymer film coating said active principle,

wherein

said non-solvent is not a solvent for the polymer, does not dissolve the active principle, and is miscible with said organic solvent for the polymer;

said curing agent does not dissolve either the polymer or the active principle and is partially miscible with the organic solvent for the polymer;

[[-]] the organic solvent for the polymer is selected from ethyl acetate, N-methylpyrrolidone, methyl ethyl ketone, acetic acid, and propylene carbonate, and mixtures thereof[[,]];

the nonsolvent and the curing agent are selected, respectively, from the following pairs:

- (A) 1,2-propanediol and 2-propanol,
- (B) glycerol and 1,2-propanediol,
- (C) glycerol and 2-propanol,
- (D) 2-propanol and 1,2-propanediol,
- (E) ethanol and water,
- (F) 2-propanol and water,,
- (G) 1, 2-propanediol and water,
- (H) ethanol and 2-propanol,
- (I) glycerol and water, and
- (J) methylethylketone and water.

2. (CANCELLED)

3. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the polymer is a biodegradable polymer with a weight-average molecular mass (Mw) of between 10,000 and 90,000 g/mol, and with a polydispersity index (Ip) of between 1 and 3.5.

4. (PREVIOUSLY PRESENTED) The process as claimed in claim 3, wherein the polymer is a lactic acid polymer (PLA) or a polymer of lactic acid and of glycolic acid (PLAGA).

5. (PREVIOUSLY PRESENTED) The process as claimed in claim 4, wherein the polymer is a PLAGA such that Mw is between 15,000 and 25,000, Ip is between 1 and 2, and the percentage of glycolic acid is less than 30%.
6. (PREVIOUSLY PRESENTED) The process as claimed in one of claims 1, 3, 4, or 5, wherein the polymer concentration in the solvent is between 1 and 10% (w/v).
7. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the nonsolvent/solvent ratio by volume is between 1/2 and 1/1.
8. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the coacervation temperature is less than the glass transition temperature of the polymer.
9. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the curing agent also contains a surfactant, the concentration of said surfactant in the curing agent being between 0.1 and 10% (v/v).
10. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the surfactant is a sorbitan ester.
11. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the curing agent/solvent ratio by volume is between 5/1 and 180/1.
12. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the microspheres are cured with stirring at a speed of between 500 and 1500 rpm.
13. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the curing temperature is less than or equal to 25°C.

14. (CURRENTLY AMENDED) The process as claimed in claim 1, wherein ~~where~~ the active principle forms a dispersion in the polymer solution, and the solvent and the nonsolvent have a viscosity that is high enough to stabilize the active principle.

15. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the active principle is dispersed by ultrasound to form a dispersion in the polymer solution, and the coacervation is performed with gentle stirring.

16. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the particle size of the active principle is between 1 and 50 micrometers.

17. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the solvent is N-methylpyrrolidone, the nonsolvent is ethanol and the curing agent is water.

18. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the solvent is ethyl acetate.

19. (PREVIOUSLY PRESENTED) The process as claimed in claim 18, wherein the solvent is ethyl acetate, the nonsolvent is 2-propanol and the curing agent is water.

20. (PREVIOUSLY PRESENTED) The process as claimed in claim 18 or 19, wherein the polymer is a 75:25 PLAGA such that the Mw is between 15,000 and 20,000.

21. (PREVIOUSLY PRESENTED) The process as claimed in claim 1, wherein the solvent is acetic acid, the curing agent is water and the polymer is a 50:50 PLAGA.

22-24. (CANCELLED)

25. (PREVIOUSLY PRESENTED) The process as claimed in claim 3, wherein the polymer is a biodegradable polymer with a weight-average molecular mass (Mw) of between 15,000 and 50,000 g/mol.

26. (PREVIOUSLY PRESENTED) The process as claimed in claim 5, wherein the polymer is a PLAGA such that Mw is equal to 17,500.

27. (PREVIOUSLY PRESENTED) The process as claimed in claim 5, wherein the polymer is a PLAGA such that I_p is equal to 2.6.

28. (PREVIOUSLY PRESENTED) The process as claimed in claim 5, wherein the polymer is a PLAGA such that the percentage of glycolic acid is equal to 25%.

29. (PREVIOUSLY PRESENTED) The process as claimed in claim 6, wherein the polymer concentration in the solvent is about 4% (w/v).

30. (PREVIOUSLY PRESENTED) The process as claimed in claim 8, wherein the coacervation temperature is less than or equal to 25° C.

31. (PREVIOUSLY PRESENTED) The process as claimed in claim 30, wherein the coacervation temperature is less than 4° C.

32. (PREVIOUSLY PRESENTED) The process as claimed in claim 31, wherein coacervation temperature is equal to -4° C.

33. (PREVIOUSLY PRESENTED) The process as claimed in claim 10, wherein the surfactant is polyoxyethylene 20 oleate or polyvinyl alcohol.

34. (PREVIOUSLY PRESENTED) The process as claimed in claim 11, wherein the curing agent/solvent ratio by volume is between 15/1 and 120/1.

35. (PREVIOUSLY PRESENTED) The process as claimed in claim 13, wherein the curing temperature is less than 4° C.

36. (PREVIOUSLY PRESENTED) The process as claimed in claim 35, wherein the curing temperature is less than or equal to 0.5° C.

37. (PREVIOUSLY PRESENTED) The process as claimed in claim 15, wherein the coacervation is performed with a gentle stirring of magnetic or mechanical type.

38. (PREVIOUSLY PRESENTED) The process as claimed in claim 16, wherein the particle size of the active principle is between 5 µm and 30 µm.

39. (PREVIOUSLY PRESENTED) The process as claimed in claim 20, wherein the polymer is a 75:25 PLAGA such that the Mw is equal to 17,500.

40. (PREVIOUSLY PRESENTED) The process as claimed in claim 20, wherein the polymer is a 75:25 PLAGA such that the Ip is equal to 1.6.

41. (NEW) A process for microencapsulating an active principle by coacervation comprising:

(a) dissolving a polymer in an organic solvent, which contains said active principle;

(b) adding a non-solvent to the solution of polymer, which induces the controlled desolvation of the polymer and allows deposition of the polymer at the surface of the active principle; and

(c) curing the polymer deposit by addition of a curing agent, which allows the formation of a continuous polymer film coating said active principle,

wherein

said non-solvent is not a solvent for the polymer, does not dissolve the active principle, and is miscible with said organic solvent for the polymer;

said curing agent does not dissolve either the polymer or the active principle and is partially miscible with the organic solvent for the polymer;

the organic solvent for the polymer is selected from ethyl acetate, N-methylpyrrolidone, methyl ethyl ketone, acetic acid, and propylene carbonate, and mixtures thereof;

the nonsolvent and the curing agent are selected, respectively, from the following pairs:

- (A) 1,2-propanediol and 2-propanol,
- (B) glycerol and 1,2-propanediol,
- (C) glycerol and 2-propanol,
- (D) 2-propanol and 1,2-propanediol,
- (E) ethanol and water,
- (F) 2-propanol and water,
- (G) 1, 2-propanediol and water,
- (H) ethanol and 2-propanol,
- (I) glycerol and water, and
- (J) methylethylketone and water, and

wherein microencapsulating the active principle by coacervation does not use any chlorinated solvent.